

Applic. No.: 10/056,356
Amdt. Dated August 27, 2004
Reply to Office action of July 1, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended) An electronic component, comprising:

a semiconductor chip having an active upper side with integrated circuits, a passive rear side, and side border regions;

said rear side and said side border regions of said semiconductor chip being outer package sides;

said rear side having corner regions and edge regions; and

at least said corner regions of said rear side, said edge regions of said rear side, and said side border regions of said semiconductor chip having a plastic coating with a thickness between 0.5 μm and 50 μm , said active upper side of said semiconductor chip remaining substantially free from said plastic coating.

Applic. No.: 10/056,356
Amdt. Dated August 27, 2004
Reply to Office action of July 1, 2004

Claim 2 (original) The electronic component according to claim 1, wherein said rear side of said semiconductor chip is completely covered by said plastic coating.

Claim 3 (previously presented) The electronic component according to claim 1 wherein said plastic coating has a state selected from the group consisting of a softened state and a melted state, said plastic coating does not wet surfaces of other solid plastic materials but wets surfaces of semiconductor materials.

Claim 4 (original) The electronic component according to claim 1, wherein said plastic coating in the state selected from the group consisting of the softened state and the melted state is adhesive with respect to semiconductor surfaces.

Claim 5 (original) The electronic component according to claim 1, wherein said plastic coating includes a material selected from the group consisting of a polymer and a copolymer.

Claim 6 (original) The electronic component according to claim 1, wherein said plastic coating includes a thermoplastic.

Claim 7 (original) The electronic component according to claim 1, wherein said plastic coating includes a material selected

Applic. No.: 10/056,356
Amdt. Dated August 27, 2004
Reply to Office action of July 1, 2004

from the group consisting of a colophony, a disproportionated colophony and a esterified colophony.

Claim 8 (original) The electronic component according to claim 1, wherein said plastic coating includes a phthalate resin.

Claim 9 (original) The electronic component according to claim 1, wherein said plastic coating includes a dimethyl glycol phthalate.

Claim 10 (original) The electronic component according to claim 1, wherein said plastic coating includes color pigments.

Claim 11 (original) The electronic component according to claim 1, wherein said semiconductor chip includes silicon.

Claim 12 (original) The electronic component according to claim 1, wherein said semiconductor chip has a crystal orientation of <100>.

Claim 13 (withdrawn). A method of producing an electronic component having a semiconductor chip with a rear side and side border regions in which the rear side and the side border regions form outer package sides, the method which comprises:

Applic. No.: 10/056,356

Amdt. Dated August 27, 2004

Reply to Office action of July 1, 2004

providing a semiconductor wafer having a rear side and a plurality of semiconductor chips;

immediately before separating individual ones of the plurality of the semiconductor chips, applying a plastic coating having a thickness in a micrometer range to the rear side of the semiconductor wafer;

separating the individual ones of the plurality of the semiconductor chips to obtain separated semiconductor chips;

thermally treating the separated semiconductor chips to perform a function selected from the group consisting of softening the plastic coating and melting the plastic coating;

using the plastic coating on the rear side of one of the separated semiconductor chips to wet corner regions, edge regions, and side border regions of the one of the separated semiconductor chips; and

completing the one of the separated semiconductor chips to form a packaged electronic component in which the rear side and the side border regions of the one of the separated semiconductor chips form outer faces of a package.

Applic. No.: 10/056,356
Amdt. Dated August 27, 2004
Reply to Office action of July 1, 2004

Claim 14 (withdrawn). The method according to claim 13, which comprises using a printing technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 15 (withdrawn). The method according to claim 13, which comprises using a screen printing technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 16 (withdrawn). The method according to claim 13, which comprises using a spraying technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 17 (withdrawn). The method according to claim 13, which comprises using a centrifuging technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 18 (withdrawn). The method according to claim 13, which comprises using an immersion technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 19 (withdrawn). The method according to claim 13, which comprises, during a thermal treatment step that is used to package the one of the separated semiconductor chips, performing the thermally treating step and performing the step

Applic. No.: 10/056,356

Amdt. Dated August 27, 2004

Reply to Office action of July 1, 2004

of using the plastic coating on the rear side of the one of the separated semiconductor chips to wet the corner regions, the edge regions, and the side border regions of the one of the separated semiconductor chips.

Claim 20 (withdrawn). The method according to claim 13, which comprises:

providing separating joins for separating the plurality of the semiconductor chips; and

performing the step of applying the plastic coating by selectively applying the plastic coating to the rear side of the semiconductor wafer such that at least all of the separating joins are covered by a width of the plastic coating that corresponds to at least twice a width of the separating joins.

Claim 21 (withdrawn). The method according to claim 20, which comprises performing the step of selectively applying the plastic coating to the rear side of the semiconductor wafer by spraying plastic of the plastic coating through a mask.

Applic. No.: 10/056,356
Amdt. Dated August 27, 2004
Reply to Office action of July 1, 2004

Claim 22 (withdrawn). The method according to claim 20, which comprises using a printing technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 23 (withdrawn). The method according to claim 20, which comprises using a screen printing technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 24 (withdrawn). The method according to claim 20, which comprises using a spraying technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 25 (withdrawn). The method according to claim 20, which comprises using a centrifuging technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 26 (withdrawn). The method according to claim 20, which comprises using an immersion technique to perform the step of applying the plastic coating to the semiconductor wafer.

Claim 27 (withdrawn). The method according to claim 20, which comprises, during a thermal treatment step that is used to package the one of the separated semiconductor chips, performing the thermally treating step and performing the step

Applic. No.: 10/056,356

Amtd. Dated August 27, 2004

Reply to Office action of July 1, 2004

of using the plastic coating on the rear side of the one of the separated semiconductor chips to wet the corner regions, the edge regions, and the side border regions of the one of the separated semiconductor chips.

Claim 28 (previously presented) The electronic component according to claim 1, wherein said plastic coating has a thickness below 15 μm .